

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEFFREY A. HARRELL and STEVEN C. BARNETT

Appeal No. 2000-0185
Application 08/847,111

ON BRIEF

Before ABRAMS, FRANKFORT, and STAAB, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 6, 8 through 22 and 24 through 34. Claims 7 and 23, which are the only other claims remaining in the application, stand objected to, but have been indicated by the examiner to be allowable if rewritten in independent

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form.

Appellants' invention relates 1) to a seal (12), seen best in Figure 2 of the application, wherein first (21) and second (22) sections of the seal have different hardness, more particularly, where the second section has a hardness that is less than the hardness of the first section (see claim 17), and 2) to a heat exchanger assembly (Figs. 1-2) that uses the above seal in a peripheral space between the housing (10) and the heat exchanger core (11) (see claim 1). An adequate understanding of the claimed subject matter can be had from a reading of illustrative claims 1 and 17, the two independent claims on appeal. A copy of those claims, as they appear in the Appendix to appellants' brief, is attached to this decision.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Iwasaki et al. (Iwasaki)	5,046,554	Sep.
10, 1991		
Weber	5,213,342	May 25,

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1993
Lusen et al. (Lusen) 5,289,658 Mar. 1,
1994

Claims 1 through 4 and 17 through 20 stand rejected under
35 U.S.C. § 103 as being unpatentable over Iwasaki in view of
Lusen.

Claims 1, 5, 6, 8 through 16, 21, 22 and 24 through 34
stand rejected under 35 U.S.C. § 103 as being unpatentable
over Iwasaki in view of Weber.

Reference is made to the answer (Paper No. 10) for the
examiner's reasoning in support of the above-noted rejections,
and to appellants' brief (Paper No. 9) and reply brief (Paper
No. 11) for the arguments thereagainst.

OPINION

Having carefully reviewed and evaluated the obviousness
issues raised in this appeal in light of the record before us,

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we have come to the conclusion, for the reasons which follow,
that the examiner's rejections of the appealed claims under 35
U.S.C. § 103 will not be sustained.

In determining the propriety of a rejection under 35
U.S.C. § 103, it is well settled that the obviousness of an
invention cannot be established by combining the teachings of
the prior art absent some teaching, suggestion or incentive
supporting the combination. See In re Fine, 837 F.2d 1071,
1073, 5 USPQ2d 1596, 1598-99 (Fed. Cir. 1988); Ashland Oil,
Inc. v. Delta Resins and Refractories, Inc., 776 F.2d 281, 297
n.24, 227 USPQ 657, 667 (Fed. Cir. 1985); ACS Hospital
Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221
USPQ 929, 933 (Fed. Cir. 1984). This is not to say that the
claimed invention must be expressly suggested in any one or
all of the references. Rather, the test for obviousness is
what the combined teachings of the references would have
suggested to those having ordinary skill in the art. See
Cable Electric Products, Inc. v. Genmark, Inc., 770 F.2d 1015,
1025, 226 USPQ 881, 886-87 (Fed. Cir. 1985); In re Kaslow, 707

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F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). The law followed by our Court of review, and thus by this Board, is that "[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). See also In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984) "In determining whether a case of prima facie obviousness exists, it is necessary to

ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification."

Looking at the Iwasaki patent, it is apparent that it discloses a heat exchanger assembly including a housing (42) and a heat exchanger core assembly (43, 44) disposed in the

housing and spaced from the housing to provide a peripheral spacing, which peripheral spacing is closed by a seal (103), seen best in Figure 7. In describing the seal (103) Iwasaki notes in column 7, lines 20-28, that the seal is

"[a] continuous seal **103**, encasing the perimeter of the heat transfer device and engaging the interior surface of the sidewall, prohibits flow of the cooling medium therebetween and further directs that all cooling medium passing through the shroud must pass through the fluid transmission means **78** and **95**. In accordance with the immediately preferred embodiment of the invention, seal **103** is formed by a foamed-in-place plastic."

Recognizing that the foamed plastic seal (103) of Iwasaki is not a two-section seal having the particular construction arrangement required in the claims on appeal, the examiner turns to the teachings of Lusen or Weber, urging that since Iwasaki and Lusen, or Iwasaki and Weber, "are both from the same field of endeavor, the purpose disclosed by... [either Lusen or Weber] would have been recognized in the pertinent art of Iwasaki et al" (answer, page 4). In each of the combinations, the examiner then goes on to conclude that it would have been obvious to one of ordinary skill in the art at

the time appellants' invention was made to "employ in Iwasaki et al a first section with a hardness greater than a second section for the purpose of providing rigidity and strength as recognized by... [Lusen or Weber]."

Even if we assume that the Lusen and Weber patents are analogous art to the heat exchanger assembly and seal disclosed and claimed by appellants and the heat exchanger module seen in Iwasaki, a point in some doubt, we must agree with appellants' position that the prior art teachings relied upon by the examiner (i.e., the oven gasket seal of Lusen and the bearing seal of Weber) would appear to be insufficient to have suggested to one of ordinary skill in the art at the time of appellants' invention the making of any modification in the seal arrangement of Iwasaki as urged by the examiner. In the first place, the sealing requirements and the problems being solved by the applied references to Iwasaki, Lusen and Weber are very different one from the other and from that confronted by appellants. Moreover, there is no indication in Iwasaki, or for that matter in Lusen or Weber, that the foamed plastic seal (103) of Iwasaki is in any way deficient as to its

rigidity and strength so that a person of ordinary skill in the art would have had some motivation or suggestion to turn to the more complicated types of multi-piece seal structures seen in Lusén and Weber so as to provide added rigidity and strength as is urged by the examiner in the answer.

In the final analysis, it is clear to us from our evaluation of the applied prior art references that the examiner has failed to provide an adequate evidential basis to support the § 103 rejections before us on appeal, and that the examiner has relied upon impermissible hindsight knowledge derived from appellants' own teachings to reconstruct the claimed subject matter out of isolated teachings in the prior art. Accordingly, we will not sustain the examiner's rejection of claims 1 through 4 and 17 through 20 under 35 U.S.C. § 103 as being unpatentable over Iwasaki in view of Lusén, or that of claims 1, 5, 6, 8 through 16, 21, 22 and 24 through 34 under 35 U.S.C. § 103 as being unpatentable over Iwasaki in view of Weber.

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The decision of the examiner is reversed.

In addition to the foregoing, we REMAND this application to the examiner for a more complete search of the prior art, particularly with regard to claims 17 through 32 on appeal, which claims are directed to the seal per se. In the examination of an application for patent, the examiner is charge with the responsibility of conducting a thorough search of the prior art, which search should cover the invention as described and claimed, including the inventive concepts toward which the claims are directed. While we note that the examiner's has searched in Class 277, we see that no inquiry was made of a Primary examiner in that art. Given the breadth of appellants' independent claim 17, we view the need for such an inquiry as essential to developing the best search of the prior art. In addition, we point the examiner to Class 49, subclasses 475+ as possible areas of search and inquiry. In this regard, we note that § 904.01(c) of the M.P.E.P. cautions the examiner that not only must the art be searched within which the invention claimed is classifiable, but also all

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pertinent and analogous arts regardless of where classified.
Other pertinent areas where the seal of claims 17 through 32
on appeal could reasonably be found may be known to the
examiner and should also be considered. In conducting any
further search of the prior art, the examiner should be
cognizant of the fact that claim 17 requires a seal including
a first
section having a first hardness and a second section
"integrally molded with said first section" having a second
hardness less than said first hardness.

REVERSED AND REMANDED

NEAL A. ABRAMS)
Administrative Patent Judge)
)
)
) BOARD OF PATENT

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CHARLES E. FRANKFORT)	
Administrative Patent Judge)	APPEALS AND
)	
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APPENDIX

1. A heat exchange assembly comprising:

a housing;

a heat exchanger core disposed in said housing and spaced from said housing to provide a peripheral spacing between said core and said housing; and

a seal disposed in said peripheral spacing including a first section engaging a portion of said core and having a first hardness and a second section integrally molded with said first section engaging a portion of said housing and having a second hardness less than said first hardness.

17. A seal for a peripheral space disposed between a housing and a core disposed in said housing comprising a member disposable in said peripheral space including a first section engageable with a portion of said core and having a first hardness and a second section integrally molded with

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said first section engageable with a portion of said housing
and having a second hardness less than said first hardness,
when said seal is disposed in said peripheral space.